Lecture 6: Analyzing Data in SPSS Using Descriptive Statistics

<u>Tasks</u>

- 1. Find the smallest, largest, and average values for **academic ability (aa**) and **parents education (pe)**.
- 2. Find the median and standard deviation for **academic ability (aa**).
- 3. Obtain a frequency distribution by referring the question, "what is breakdown for the percentage of **student motivation** (i.e. **sm**)?"
- 4. Are students from urban communities rated similarly to those from rural communities in terms of their advisor evaluation?

<u> Tips for Task 1</u>

Now, from the **Analyze** pull-down menu, select **Descriptive Statistics** and then **Descriptives** (see Fig 1). In the next step, you will see a dialog box (see Fig 2) and then select the desired variables (i.e., **aa** and **pe**) by highlighting them and sending them into the variables box by clicking on the arrow in the centre of the window. Then, click on **Options** and choose <u>min., max. Std.</u> <u>deviation and mean</u>. Finally, click the **OK** button to obtain the outcome (see Fig 3).







Tips for Task 2

From the Analyze pull-down menu, select **Descriptive Statistics** and then **Explore** (see fig 4). In a dialog box, send academic ability (**aa**) to the **Dependent list** and click on **statistics** in the display box (see fig 5) and then select **Descriptives**, and enter 95% for the confidence interval for mean, then click continue and **OK** (see fig 6). Finally, verify your outputs by referring Fig 7.



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 Respondent Numb Parents's education Student Motivation Advisor Evaluation Religious Affiliation Gender [g] 	Dependent List: Academic Abitity [aa] <u>Factor List:</u>	Car	K iste iset
Community Type [c Precorded academic Crecorded aa [aanev Crecorded aa1 [aanev Display	Label <u>C</u> ases by:	<u>н</u>	elp
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Continue C	ancel	Help	<u>FIG 6</u>



Tips for Task 3

From the **Analyze** pull-down menu, select **Descriptive Statistics** and then **Frequencies** dialog box (see fig 8). Send "student motivation (**sm**)" variables Into the variable box, then click on **OK** button (see Fig 9 and 10).





Tips for task 4

One of the most common ways of looking at the association between two categorical variables is to use the <u>chi-square statistic</u>.

 To answer this question, we need to <u>cross-tabulate</u> the two variables and look at the percentage of students from each community type who were evaluated into each of the three categories of likelihood to succeed. We would then test the similarity of the two distributions using the chi-square statistic. • To create the cross-tabulation, from the Analyze pull-down menu, select Descriptive Statistics then choose Crosstab (see fig 11). Then, select community type "c" for the row variable and advisor evaluation "ae" for the column variable (see fig 12) and click the Statistics button. In the next dialog box, click the box next to chi-square, then press the Continue button (see fig 13). Next, click both on the Cells button and the Observed count box, as you will be interested in the number of cases in each cell of the table. Next, click the Row percentages box (see fig 14). Click the Continue button, then click the OK button (see figs 15a and 15b).



🗱 Crosstabs 🔀	
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Exact <u>Statistics</u> <u>Cells</u> <u>Format</u>	FIG 12

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Community Type * Advisor Evaluation Crosstabulation

			Advisor Evaluation			
			Fail	Succeed or Fail	Succeed	Total
Community	Urban	Count	9	14	7	30
Туре		% within Community Type	30.0%	46.7%	23.3%	100.0%
	Rural	Count	4	11	5	20
		% within Community Type	20.0%	55.0%	25.0%	100.0%
Total		Count	13	25	12	50
		% within Community Type	26.0%	50.0%	24.0%	100.0%

<u>FIG 15</u>

<u>FIG 16</u>